



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,899	12/08/2003	Kan Akatsu	023971-0345	9315
22428	7590	03/22/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			WHITTINGTON, KENNETH	
			ART UNIT	PAPER NUMBER
			2862	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/728,899	<b>Applicant(s)</b> AKATSU ET AL.	
	<b>Examiner</b> Kenneth J Whittington	<b>Art Unit</b> 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/8/03, 6/23/04, 8/</u> | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Specification***

The disclosure is objected to because of the following informalities:

- 5       on page 11, line 6, "7-2-1" should be "7-1-1"
- on page 11, lines 8 and 12, "fifth" should be "fourth"
- on page 12, lines 16-19, the repetitive clause "and an  
outer rotor 143 disposed on an outer periphery of stator 12,"  
should be deleted (note also the incorrect reference numeral  
10 143, which should be 14).

Appropriate correction is required.

***Claim Objections***

- Claim 4 is objected to because of the following
- 15 informalities: on page 15, lines 31-32, the last phrase "and  
ordinarily sinusoidal wave of  $A=E\sin(\omega t)$  is added" is unclear.  
Amending this phrase to "wherein  $A=E\sin(\omega t)$ " would clear up the  
phrase and obviate the objection. Appropriate correction is  
required.

20

***Allowable Subject Matter***

Claims 1-10 are allowed.

Art Unit: 2862

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 9 and 10, the prior art discloses co-axial multiplex position detecting apparatus for rotating machines and the like comprising a stator having pole pieces with detection coils and excitation coils mounted thereon, the stator disposed between movable rotors in the same radial plane, wherein the revolution position of each rotor is determined with a dedicated detection winding arrangement (See JP2001-012969A).

10 The prior art also discloses several designs wherein the rotors have recesses related to the number of poles of the rotors (See US 5,339,030 and 6,541,959). However, the prior art does not disclose the revolution positions of the respective rotors being determined according to the output signal from a single

15 detection winding on the stator, in combination with the other features of the claims.

Claims 2-8 are allowed for the same reasons as noted above with respect to claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2862

***Cited Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gaches  
5 (FR002599137A1) and Kazuto (JP62-185120) teach methods and devices for measuring the revolution positions between two relatively movable members. Goossens (US 5,508,608) teaches measuring movement between a rotor and stator using a coupled inner and outer rotor surrounding the stator by measuring a  
10 combined signal, the rotors having an identical number of poles for both the inner and outer rotors.

***Conclusion***

This application is in condition for allowance except for  
15 the formal matters noted above with respect to the Specification.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is  
20 set to expire **TWO MONTHS** from the mailing date of this letter.

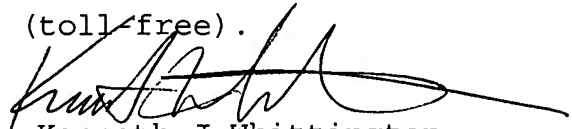
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J Whittington whose telephone number is (571) 272-2264. The

Art Unit: 2862


examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kenneth J Whittington  
Examiner  
Art Unit 2862

kjw

  
JAY PATIDAR  
PRIMARY EXAMINER